# For Creative Minds

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#### **Desert Habitat Fun Facts**

A habitat is where something lives—where it can meet all of its basic needs. Living things interact with each other and the non-living things in that same habitat. There are many different types of habitats all over the world.

Living things rely on non-living things in their habitat: soil, water, air, and climate.

Plants need water, nutrients, sunlight and heat in which to grow, and a way for seeds to move (disperse).

Animals need food, water, oxygen to breathe, and a safe space for shelter and for giving birth to their young.

Some deserts are hot and some are cold, but all deserts have a dry climate. Deserts receive an average of less than 10 to 12 inches (25 to 30 cm) of rain per year! Parts of the Atacama Desert in South America haven't had any rain in 100 years. The deserts of the American Southwest average between 2 to 8 inches of rain a year.

Desert plants and animals must survive with little water.

In some ways, clouds act like a blanket at night. Thick, heavy clouds help keep warm temperatures on land. When there are no clouds at night, the land loses all the heat from the sun that had built up all day. Because deserts are so dry, they don't have many clouds. Deserts that get very hot during the day can get very cold at night.

Plants and animals that live in hot deserts have to be able to stay cool during the day but warm at night.

Some cactuses need specific types of bats to pollinate them. Because bats are active at night (nocturnal), these cactuses bloom at night to attract the bats!

There are deserts all over the world—even in the Arctic and Antarctic!



#### **Desert Adaptations Matching**



Match the desert animal to the adaptation that allows it to survive in the dry desert.

- 1. These reptiles store up to a quart of water in their bladders and can go weeks without eating or drinking. They also dig burrows to hide from the heat during the day and dig holes to catch rain when it does fall.
- 2. These birds soar without flapping their wings often so they don't use up energy while on long searches for food.
- 3. These flying mammals sleep in crevices in canyon walls or deep in caves where it's cooler.
- 4. These (two) mammals hunt at night when it's cooler.
- 5. These reptiles go into the burrows of other animals or under brush to cool off in the heat.
- 6. These mammals are active around dusk and dawn in the colder months and at night during the hottest months. They can get water from eating their favorite food: the prickly pear cactus.
- 7. These mammals will eat a wide variety of vegetation to get all the nutrients that they need. During hot seasons, they are active at night and in the cooler morning hours.
- 8. These birds prefer running to flying. While they will drink water, they usually get enough water from the small animals they eat.
- 9. These birds prefer running to flying too. Large social groups roost together for warmth on cold nights.

Answers: 1) desert tortoises, 2) turkey vultures, 3) bats, 4) coyotes and bobcats, 5) diamondback rattlesnakes, 6) javelina, 7) mule deer, 8) roadrunner, 9) scaled quail

#### **Deserts in North America**



In what two states is the Sonoran Desert?

The turkey vulture can be found in every U.S. state except Alaska and Hawaii. In which deserts can you find the turkey vulture?

Are there any deserts in the state or province in which you live?

If not, what states would you have to go through to get to the closest desert?

Answers: ۱) Sonoran and Chihuahua; 2) Chihuahua; 3) Great Basin; 4) Arizona and California; 5) All four North American deserts; 6 & 7) answers depend on where child lives

## Bath Time: True or False

Which statements are true or false?

- **1.** Not all animals use water to bathe.
- 2. Animals take baths to get rid of dirt, germs, bugs, and parasites.
- **3.** Humans use soap and water in their baths to get rid of dirt and germs.
- **4.** Javelinas roll around in mud to cool off and to scrape off parasites.
- **5.** Some animals (cats, dogs, bats) lick themselves to get clean.
- 6. Scaled quail put ants on their feathers. As the ants move, they drop an acid that helps protect the birds' skin.
- 7. Western banded geckos don't have eyelids. They lick their eyeballs to keep them moist and clean.
- 8. Roadrunners take dust baths. The dust clogs the breathing holes of the parasites in the feathers. Then, when the birds shake off the dust, the parasites drop off too.
- 9. Desert tortoises go out whenever it rains to drink water and soak in puddles.
- 10. Snakes shed their small, dirty skin a few times a year. The new skin is big, healthy, and clean.
- **11.** Turkey vultures spread their wings in the sunlight to maintain body temperature and feather health. Sunning makes parasites move to other parts of the bird's feathers, making it easier for the birds to remove them (preening).



# **Food For Thought**

Personal hygiene means the ways you stay clean.

- How do you wash your hands?
  - How do you clean your teeth?
    - How do you take a bath?
- How often do you take a bath?

How is your personal hygiene similar to or different from the animals' personal hygiene?

# What Time of Day?

Throughout history and all over the world, people do certain things at certain times of the day. We do too. We brush our teeth and eat breakfast when we get up in the morning. We usually eat lunch around noon and dinner or supper in the evening. Some people take showers or baths in the evening and some take them in the morning.

All over the world, with the exception of the Arctic and Antarctic, the sun rises in the east early in the morning, is high in the sky midday, and then sets in the west in the evening. You can tell if it is morning or afternoon by where the sun is in the sky.

The moon rises in the east and sets in the west but rises and sets at a different time each day. Depending on where it is in the moon (lunar) cycle, the shape looks different too!



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1		Can you tell what time of day it is by where the sun is? Is it morning (AM) or evening (PM)?
2		The roadrunner runs at noon. What are some things that you might do around noon?
3		Can you tell what time of day it is by where the sun is now?
4		The gecko eats its breakfast in the evening. What meal do you eat in the evening?
5		The pallid bat is up at midnight. What are you doing at midnight?

take baths in the evening. 5) Hopefully you are sleeping!

Answers: 1) Sun rising in the east means it's morning (am). 2) Most people eat lunch around noon. 3) Sun setting in the west means it's evening. 4) Most people eat dinner or supper and many people.

## Hands on: Telling Time by the Sun's Position

Long before people had watches, clocks, or cell phones, they used the sun's position in the sky to tell the time of day. At first, people probably divided the day between sunlight and darkness. Then they probably noticed and watched how the sun moved across the sky and how the shadows changed as the sun moved.

- Go outside early in the morning and notice where the sun is rising—that's east. Turn so the sun is on your right. You are now looking north. Make a drawing of your location showing the sun in the east as if you are looking north.
- Set an alarm or timer and go outside every one or two hours during the day. Make note of the sun's position in the sky. Each time you go outside, add a sun to your drawing to show its location. Make sure to label the time.
- Each time you go outside, look at your shadow or the shadow of things around you. How do the shadows change during the day?
- Each time you look for the sun, check to see if you can see the moon too. If so, where is it and what does it look like?
- Watch to see where the sun sets in the west.



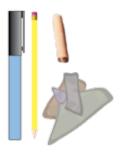
Sundials were the first "clocks." The early sundials were probably little more than a stick in the middle of a circle with notches to show how the shadows moved—based on how the sun moved. Design and make your own sundial.



What will you use to make your circle?

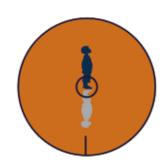


What will you use for your stick and how will you make it stand up?



What will you use to make your notches to mark the time?

How often will you check your sundial and make notches to show time passage?



Where will you build or place your sundial? It needs to be in a large, sunny spot.